

REMARKS

Favorable reconsideration of this application, in light of the following discussion and in view of the present amendment, is respectfully requested.

Claims 1 and 4-9 are amended. Claims 10-11 are added. Claims 1-11 are pending in the application.

I. Rejection under 35 U.S.C. § 112

In the Office Action, at page 2, numbered paragraph 2, claims 1-9 were rejected under 35 U.S.C. § 112, 2nd paragraph as being indefinite. In light of the comments noted in the outstanding Office Action, claims 1 and 4-9 were amended. Accordingly, it is respectfully requested that this rejection be withdrawn.

II. Rejections under 35 U.S.C. § 102

In the Office Action, at page 2, numbered paragraph 4, claims 1, 2, 4 and 7 were rejected under 35 U.S.C. § 102(b) as being unpatentable over Japanese Pat. No. 7-195473. This rejection is respectfully traversed because Japan '473 does not discuss or suggest:

adjusting mechanisms fixed to the other of the moving platen and the base in such a manner as to freely abut against the guide faces;

wherein each adjusting mechanism abuts against each guide face such that the adjusting mechanism may adjust the inclination of the moving platen with respect to the stationary platen in a horizontal direction; and

wherein a position of at least one element of the adjustment mechanism against the guide face is varied in order to adjust the inclination of the moving platen in a horizontal direction,

as recited in amended independent claim 1.

As a non-limiting example, the present invention is a clamping mechanism for an injection molding machine. The clamping mechanism includes a base and a moving platen movable on the base. In one embodiment, at least two guide faces are formed at an inside surface of the base. At least two adjusting mechanisms are fixed to and disposed under the moving platen. Each of the adjusting mechanisms abuts against one of the guide faces and has at least one element that adjusts against the guide face. The position of the element is varied to adjust the inclination of the moving platen in a horizontal direction with respect to a vertical axis of the moving platen. In another embodiment, the two guides are formed at a side surface in a

lower portion of the moving platen. The adjusting mechanisms are mounted on the base and abut against the guide faces. When at least one element is adjusted against the guide face, the inclination of the moving platen is adjusted.

In contrast, Japan '473 does not discuss or suggest that the adjusting mechanisms freely abut against the guide faces such that the adjusting mechanisms may adjust the inclination of the moving platen with respect to a stationary platen in a horizontal direction. Japan '473 further does not discuss or suggest that the position of an element of the adjusting mechanism against the guide face may be varied in order to adjust the inclination of the moving platen in a horizontal direction. Japan '473 instead shows height-adjustable shoes set on a base in between a movable platen and a base. The Examiner alleges that the guide faces (4) of Japan '473 are formed at an inside surface of a base, then alleges that the adjusting mechanisms freely abut against the guide faces. The adjusting mechanisms do not abut against the guide faces cited, but sit on the top of the base. Further, the adjusting mechanisms do not *freely* abut against the guide faces such that the adjusting mechanisms may adjust the inclination of the moving platen with respect to the stationary platen in a horizontal direction. There is no freedom of movement of the adjusting mechanism against the guide face that allows the adjusting mechanism to adjust the inclination in a horizontal direction. Additionally, Japan '473 does not discuss a positional adjustment of an element of the adjusting mechanism against the guide face to adjust the inclination of the moving platen in a horizontal direction. Mention is made of height adjustment, but it is unclear as to how adjustment in a horizontal direction may occur.

Therefore, as Japan '473 does not discuss or suggest adjusting mechanisms freely abutting the guide faces such that the adjusting mechanisms may adjust the inclination of the moving platen with respect to a stationary platen in a horizontal direction, as set forth in claim 1, claim 1 patentably distinguishes over Japan '473.

Claims 2, 4 and 7 depend directly from claim 1 and include all the features of that claim, plus additional features that are not discussed or suggested by the prior art. For example, claim 4 recites that "each of the guide faces is formed at the inside surface of a base frame forming the base, and each of the adjusting mechanisms is disposed under the moving platen." As these claims are dependent on claim 1, they are believed to be allowable for at least the reasons noted above.

In the Office Action, at page 3, numbered paragraph 5, claims 1, 2 and 4 were rejected under 35 U.S.C. § 102(b) as being unpatentable over Japanese Pat. No. 9-262884. This rejection is respectfully traversed because Japan '884 does not teach or suggest the features of

claim 1.

Japan '884 discusses a clamping mechanism that includes a movable plate that is supported on track rails by linear guide devices. Japan '884 does not discuss or suggest an adjusting mechanism that is freely abutting a guide face such that an adjustment of the adjusting mechanism inclines the movable plate in a horizontal direction, as recited in claim 1. In fact, no mention is made of providing a horizontal adjustment of the movable plate. Further, Japan '884 does not discuss or suggest that the horizontal inclination of the movable plate occurs through a variation in the position of an element of the adjusting mechanism against the guide face. Japan '884 only appears to discuss linear guide devices that guide the movable plate along the track rail.

Therefore, as Japan '884 does not discuss or suggest adjusting mechanisms freely abutting the guide faces such that the adjusting mechanisms may adjust the inclination of the moving platen with respect to a stationary platen in a horizontal direction, as set forth in claim 1, claim 1 patentably distinguishes over Japan '884.

Claims 2 and 4 depend directly from claim 1 and include all the features of that claim, plus additional features that are not discussed or suggested by the reference relied upon. For example, claim 2 recites that "the moving platen is a movable platen, to which a movable side mold is fixed." As these claims are dependent on claim 1, they are believed to be allowable for at least the reasons noted above.

In the Office Action, at page 3, numbered paragraph 6, claims 1 and 2 were rejected under 35 U.S.C. § 102(b) as being unpatentable over Japanese Patent No. 62-104918. This rejection is respectfully traversed because Japan '918 does not discuss or suggest the features of claim 1.

Japan '918 discusses a movable platen movable between a stationary platen and an end plate. A vertical adjustment mechanism is provided on the moving platen at the side of the end plate and is used to guide and support the moving platen to allow the moving platen to incline in a vertical direction. Japan '918 does not discuss or suggest that the "adjusting mechanism abuts against each guide face such that the adjusting mechanism may adjust the inclination of the moving platen...*in a horizontal direction*," as recited in claim 1. Nor does Japan '918 discuss or suggest that the position of one element of the adjustment mechanism against the guide face is varied to adjust the inclination of the moving platen.

Therefore, as Japan '918 does not discuss or suggest adjusting mechanisms freely abutting the guide faces such that the adjusting mechanisms may adjust the inclination of the

moving platen with respect to a stationary platen in a horizontal direction, as set forth in claim 1, claim 1 patentably distinguishes over Japan '918.

Claim 2 depends directly from claim 1 and includes all the features of that claim, plus additional features that are not discussed or suggested by the prior art. As this claim is dependent on claim 1, it is believed to be allowable for at least the reasons noted above.

In the Office Action, at page 3, numbered paragraph 7, claims 1, 2, 4, 8 and 9 were rejected under 35 U.S.C. § 102(a) as being unpatentable over U.S. Patent No. 4,453,912 to Hehl. This rejection is respectfully traversed because Hehl does not discuss or suggest the features of claim 1.

Hehl discusses a guide arrangement for a movable die carrier that is supported by guide rails. Vertical and horizontal recirculating roller tracks of a guide bogie engage a horizontal and vertical runway of each guide rail. Each guide bogie is adjustably connected to an inclined strut of the movable die carrier. The roller tracks of the guide bogies allow a higher load-carrying capability because the load is distributed over a plurality of bearing rollers. However, Hehl does not discuss or suggest that the adjusting mechanisms freely abut against each guide face, and that the adjusting mechanism may adjust the inclination of the moving platen in a horizontal direction, as recited in claim 1. The screws in Hehl are adjusted to distribute the load to both the horizontal and vertical runways of the guide rails. Hehl does not, however, discuss adjusting the inclination of the moving platen with respect to the stationary platen in a *horizontal direction* (as defined within the disclosure of the present invention). Further, Hehl does not discuss or suggest varying the position of one element of the adjusting mechanism against the guide face in order to adjust such inclination of the moving platen.

Therefore, as Hehl does not discuss or suggest that "each adjusting mechanism abuts against each guide face such that the adjusting mechanism may adjust the inclination of the moving platen with respect to the stationary platen in a horizontal direction; and wherein a position of at least one element of the adjustment mechanism against the guide face is varied in order to adjust the inclination of the moving platen in a horizontal direction," as recited in claim 1, claim 1 patentably distinguishes over the reference relied upon.

Claims 2, 4, 8 and 9 depend directly from claim 1 and include all the features of that claim, plus additional features that are not discussed or suggested by the prior art. For example, claim 8 recites "the adjusting mechanism includes a fixing member fixed to the base or the moving platen, a screw screwed to the fixing member and a plate disposed at the tip of the screw, the plate sliding with respect to the guide face." As these claims are dependent on claim

1, they are therefore believed to be allowable for at least the reasons noted above.

In the Office Action, at page 4, numbered paragraph 8, claims 1, 2, 7 and 8 were rejected under 35 U.S.C. § 102(a) as being unpatentable over U.S. Patent No. 3,674,400 to Sauerbruch et al. This rejection is respectfully traversed because Sauerbruch does not discuss or suggest the features of claim 1.

Sauerbruch discusses a clamping mechanism that includes a shoe mounted between a moving platen and a guide rail. Sauerbruch does not discuss or suggest an adjusting mechanism freely abutting against the guide face. Sauerbruch additionally makes no indication that the adjusting mechanism abuts against the guide face in order to adjust the inclination of the movable platen in a horizontal direction, as recited in claim 1. Nor does Sauerbruch discuss or suggest that the position of an element of the adjusting mechanism against the guide face varies in order to adjust the inclination of the movable platen in a horizontal direction.

Therefore, as Sauerbruch does not discuss or suggest that "each adjusting mechanism abuts against each guide face such that the adjusting mechanism may adjust the inclination of the moving platen with respect to the stationary platen in a horizontal direction; and wherein a position of at least one element of the adjustment mechanism against the guide face is varied in order to adjust the inclination of the moving platen in a horizontal direction," as recited in claim 1, claim 1 patentably distinguishes over the reference relied upon.

Claims 2, 4, 8 and 9 depend directly from claim 1 and include all the features of that claim, plus additional features that are not discussed or suggested by the prior art. As these claims are dependent on claim 1, they are therefore believed to be allowable for at least the reasons noted above.

III. Rejections under 35 U.S.C. § 103

In the Office Action, at page 5, numbered paragraph 12, claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan '473, Japan '884, Japan '918, Hehl and Sauerbruch in view of U.S. Patent No. 4,571,169 to Shima et al. This rejection is respectfully traversed.

Claim 3 depends directly from independent claim 1. As discussed above, the Japan '473, Japan '884, Japan '918, Hehl and Sauerbruch references do not discuss or suggest the features of claim 1. Applicants respectfully submit that Shima fails to make up for this deficiency. Rather, Shima discusses a movable mold platen and a bearing platen each having slide metals. Shima does not discuss or suggest that "each adjusting mechanism abuts against

each guide face such that the adjusting mechanism may adjust the inclination of the moving platen with respect to the stationary platen in a horizontal direction,” as recited in independent claim 1, nor does Shima discuss or suggest that “a position of at least one element of the adjustment mechanism against the guide face is varied in order to adjust the inclination of the moving platen in a horizontal direction,” as also recited in claim 1. The Applicants respectfully submit that none of Japan ‘473, Japan ‘884, Japan ‘918, Hehl and Sauerbruch, and Shima, individually or combined, discuss or suggest all of the elements of claim 1. Further, claim 3 depends from claim 1 and includes all the features of that claim, plus additional features that are not discussed or suggested by the references relied upon. As claim 3 is dependent on claim 1, claim 3 is therefore believed to be allowable for at least the reasons noted above.

In the Office Action, at page 6, numbered paragraph 13, claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over any one of Japan ‘473, Japan ‘884, Japan ‘918, Hehl, and Sauerbruch. This rejection is respectfully traversed.

As discussed above, the applicants submit that none of Japan ‘473, Japan ‘884, Japan ‘918, Hehl and Sauerbruch, individually or combined, discuss or suggest all of the elements of claim 1. Common knowledge of one skilled in the art fails to make up for the deficiencies in the references cited. Further, claim 5 depends from claim 1 and includes all the features of that claim, plus additional features that are not discussed or suggested by the references relied upon. For example, claim 5 recites that “the guide face is formed at a side surface in the lower portion of the moving platen, and the adjusting mechanism is mounted on the base frame.” Accordingly, as claim 5 is dependent on claim 1, claim 5 is believed to be allowable for at least the reasons noted above.

In the Office Action, at page 6, numbered paragraph 14, claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan ‘918. This rejection is respectfully traversed.

As discussed above, the applicants submit that Japan ‘918 does not discuss or suggest all the elements of claim 1. Common knowledge of one skilled in the art fails to make up for the deficiencies in Japan ‘918. Further, claim 6 depends from claim 1 and includes all the features of that claim, plus additional features that are not discussed or suggested by the reference relied upon. For example, claim 6 recites that “the adjusting mechanism is provided with a fixing shaft having a leg and a head deviated from the axis of the leg and a rotary roller rotating around the head of the fixing shaft, and is fixed to the moving platen or the base in such a manner that the rotary roller abuts against the guide face.” Accordingly, as claim 6 is dependent on claim 1, claim 6 is believed to be allowable for at least the reasons noted above.

IV. New Claims

New claim 10 recites that the features of the present invention include a clamping mechanism having “at least two guide faces each formed at an inside surface of the base; and at least two adjusting mechanisms, each adjusting mechanism fixed to and disposed under the moving platen, each adjusting mechanism abutting against one of the guide faces and having at least one element that adjusts against the guide face; wherein each adjusting mechanism is adjustable such that the moving platen is inclined in a horizontal direction relative to a vertical axis of the moving platen.” Nothing in the references relied upon discusses or suggests such. It is submitted that the new claim 10, which is different from prior filed claims, distinguishes over the references relied upon.

New claim 11 recites that the features of the present invention include a clamping mechanism having “at least two guide faces each formed at a side surface in the lower portion of the moving platen; and at least two adjusting mechanisms, each adjusting mechanism mounted on the base, each adjusting mechanism abutting against one of the guide faces and having at least one element that adjusts against the guide face; and wherein each adjusting mechanism is adjustable such that the moving platen is inclined in a horizontal direction relative to a vertical axis of the moving platen.” Nothing in the references relied upon discusses or suggests such. It is submitted that the new claim 11, which is different from prior filed claims, distinguishes over the references relied upon.

Conclusion

In accordance with the foregoing, claims 1 and 4-9 have been amended. Claims 10-11 have been added. Claims 1-11 are pending and under consideration.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

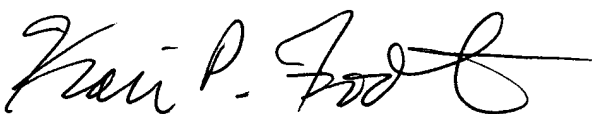
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 2/22/06

By: 
Kari P. Footland
Registration No. 55,187

1201 New York Avenue, NW, Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501